Dear FCC officers:

In light of recent events, I feel compelled to comment with emphasis regarding Docket 03-104, covering expanded BPL service.

To preface my comments, I am an electrical engineer, a physicist, and part of my school curriculum was electrical power generation and distribution. My Graduate work focused on antenna theory and design, with a special effort in the development of mathmatical solutions to antenna problems. My research at times has focused on low power radio weak signal work, and development of recievers capable of detecting signals rfom several miles transmitted with owers reaching into the noise floor near -156 dBm output power.

I have published some of my research and experiemental techniques for the identification, quatification and testing of RFI issues.
See Jan 2002 QEX for my work using a sound card and a HF reciever to measure the impact of RFI on HF signals.

To intentionally increase signal levels in the amatuer allocations of the HF band is silly.
The band already has enough interference. Adding more in every neighborhood is tragic.

Considering Power Distribution, With the recent blackout in the eastern parts of the US and Canada, it has
become obvious that the electric power utilities are in dire need of modernization. This has been noted at many points in the past, but this past week, it became obvious that the condition of the North American power grid is far worse than believed.

Still, these same power companies wish to provide high-speed internet access to their customers while their ability to reliably provide electrical power is apparently quite suspect.

At the same time as the blackout was demonstrating the problems with the power grid, and cellular phone systems were becoming useless due to overuse, one of the groups that would be MOST harmed by BPL's use - amateur radio operators - were donating their time, skill, and personally-purchased equipment to provide much-needed communications support to emergency serices (fire, police), service agencies (Red Cross), and the general public.

...as ham radio operators have unselfishly done countless times in the past...

When a power blackout struck at least a half dozen eastern states August 14, many Amateur Radio operators were ready and able to provide whatever assistance they could. Hardest hit were metropolitan areas like New York City, Detroit and Cleveland. With cellular systems overloaded or out altogether, the incident turned into a test of Amateur Radio's capabilities to operate without commercial power.

New York City-Long Island Section Emergency Coordinator Tom Carrubba, KA2D, called the response "a good drill," but says it was a cautionary tale too. "The lesson is that everybody gets a little complacent," he said. "Have emergency power backup and make sure

it's working!" By and large, Carrubba said, ARES members did what they were trained to do. "It's going to show the worth of Amateur Radio," he said of the blackout response. "There were people on the air immediately."

Diane Ortiz, K2DO, the Public Information Coordinator for NYC-Long Island was one of them. When power went down in her Suffolk County community, she started up an informal VHF net. Over the next 20 hours or so, it passed some 500 pieces of traffic. In addition to handling messages for people stranded in the city, amateurs also relayed useful information, such as which stores or filling stations were open and operating. With many radio and TV stations dark, hams were able to help fill the information void, Ortiz said.

In the Big Apple itself, ARES teams provided communication support for Red Cross Emergency Response Vehicles (ERVs) set up at main transportation centers in Manhattan. ARES members also accompanied ERVs on fire calls.

RACES activated in most Greater New York City area counties after a state of emergency was declared. Some ARES teams--including a few across the Hudson River in New Jersey--activated or remained on standby to help if called upon. In New Jersey, a net linked the Red Cross lead chapter's N2ARC in Princeton with other New Jersey ARC chapters.

Michigan Section Manager Dale Williams, WA8EFK, relied on his emergency generator. Some Michigan ARES teams assisted emergency operations centers and the Red Cross, he said. In Ohio, Section Emergency Coordinator Larry Rain, WD8IHP, reports that all ARES organizations in northern Ohio were activated. Still going strong at week's end were ARES teams in Cleveland and Akron. ARES handled communication support for Ohio Emergency Management.

Nancy Hall, KC4IYD--who lives west of Cleveland--said she's glad she took the ARRL Emergency Communications Level I class. "I have to say that being a ham and knowing about emergency preparedness did make life easier for me and my family," she said.

Yet at this time, it is these same ham radio operators who have provided public service free of cost whose allocated frequencies are literally "under attack" by the spectre of BPL.

BPL will splatter RF noise from approximately 2-80 MHz over much of the country, rendering these frequencies nearly useless for amateur or nearly any other service...and there are a LOT of users, including commercial aviation, hams, the military, radio astronomers, the Dept. of Commerce, the Coast Guard, and many others.

Many of these users are from licensed services, such as amateur radio. Remember that if hams are subject to interference, it is the responsibility of the source of interference to cease this interference.

The only way to eliminate BPL interference is to shut it off completely.

Further, any system that radiates, due to the law of reciprocity, is also capable of receiving energy. All of those legally present

transmitted signals would serve to interfere with BPL systems and users, and it would be the responsibility of the power companies to resolve these complaints by performing modifications on their own system.

I find it hard to imagine how a BPL customer can co-exist with a current liscenced Amatuer Radio Operator
who is currently operating within the legal limits of their provisions.

Imagine a 40Meter station operation at 1000Watts next door to a BPL customer trying to access the internet....
Just a completely incompatible situation.

Additionally, let it be known that, historically speaking, many power companies have very poor track records with ceasing the interference caused to ham operators simply through their ELECTRIC DISTRIBUTION equipment. Adding BPL to their plates would only complicate matters.

In a world of fiber-optic cable, satellites, and cable modems, BPL is neither a good idea nor necessary.

Within the last few years a major internet DSL providor went bancrupt, and stopped providing service through cable technology.
While this left many subsribers without service, it really underscores the finacial fragility of the current internet access market.

Clearly the main motivation of the BPL proponents is to make money. It is not wise to upset a market that already has suffered
catastrophic loss of service due to supply and demand related issues. Spreading the demand among several more suppliers begs to disrupt the stability financially of the existing service technologies.

Seeing as the hardwired service providors are not turning away customers due to overloaded circuits in most populated area's, adding another form of the same service is not finacially justified.

BPL's mere use would cause millions of licensed users of the HF spectrum to effectively go silent, and would pollute the HF spectrum in ways that could only be considered irresponsible at best, criminal at worst.

Finally, imagine a country with no volunteer ham operators. In today's world, hams are a valuable line of defense in ensuring national security. Hams provide communications support, free of charge, in times of natural and other disasters (witness the thousands of volunteer ham hours given in the support of 9/11).

Where is the protection for licensed operators who are supposed to be protected from interference sources?

If you are curious just how deleterious the effects of BPL will be, please visit:

http://www.arrl.org/news/stories/2003/08/08/2/?nc=1

and proceed down the page to hear the noise.

Now imagine trying to communicate through it.

It is time to tell the power companies this is NOT a good idea, simply because it is NOT a good idea unless it can coexist with other systems... which it simply cannot!

It's time to tell the POWER companies to work on providing reliable POWER, NOT to offer us a redundant, very flawed broadband option.

I support fully the well founded Comment submitted by The American Radio Relay League concerning Docket ET 03-104. I conclude the comments made by proponents of Broadband over Power Line (BPL) have little if any credible scientific data to support approval of this docket at this time. Further research and innovations in BPL will be needed to avoid the great risk this innovative technology will not cause irreparable interference to services licensed to operate in the 2 MHz - 80 MHz frequency range. Approval of ET 03-104 would violate the existing FCC rules on non-interference and would be contrary to the best interest of the public.

Please vote to reject the implementation of BPL.

Sincerely,

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